This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1.-2. (canceled)

3. (new) A biocompatible poly-β-1→ 4-N-acetylglucosamine comprising about 4,000 to about 150,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation and having a molecular weight of about 800,000 daltons to about 30 million daltons.

4. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 3 having about 4,000 to about 15,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation, and having a molecular weight of about 800,000 daltons to about 3 million daltons.

5. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 3 or 4 whose biocompatibility is determined by an elution test.

6. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 5 which has an elution test score of 0.

7. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 5 which has an elution test score of 1.

8. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 5 which has an elution test score of 2.

9. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 3 or 4 whose biocompatibility is determined by intramuscular implantation in rabbits.

10. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 3 or 4 whose biocompatibility is determined by intracutaneous injection in rabbits.

11. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 3 or 4 whose biocompatibility is determined by systemic injections in mice.

12. (new) A biocompatible poly-β-1→ 4-N-acetylglucosamine comprising about 4,000 to about 150,000 N-acetylglucosamine monosaccharides covalently attached in

a β-1→ 4 conformation and having a molecular weight of about 800,000 daltons to about 30 million daltons in at least one N-acetylglucosamine monosaccharide has been deacetylated.

13. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 12 having about 4,000 to about 15,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation, and having a molecular weight of about 800,000 daltons to about 3 million daltons in which at least one N-acetylglucosamine monosaccharide has been deacetylated.

14. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 12 wherein at least about 25% to about 75% of the N-acetylglucosamine monosaccharides have been deacetylated.

15. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 13 wherein at least about 25% to about 75% of the N-acetylglucosamine monosaccharides have been deacetylated.

16. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine derivative of claim 12 wherein at least about 70% of the N-acetylglucosamine monosaccharides have been deacetylated.

17. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine derivative of claim 13 wherein at least about 70% of the N-acetylglucosamine monosaccharides have been deacetylated.

18. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of any one of claims 12-17 whose biocompatibility is determined by an elution test.

19. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 18 which has an elution test score of 0.

20. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 18 which has an elution test score of 1

21. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of claim 18 which has an elution test score of 2.

22. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of any one of claims 12-17 whose biocompatibility is determined by intramuscular implantation in rabbits.

23. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of any one of claims 12-17 whose biocompatibility is determined by intracutaneous injection in rabbits.

24. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of any one of claims 12-17 whose biocompatibility is determined by systemic injections in mice.

25. (new) The biocompatible poly-β-1→ 4-N-acetylglucosamine of any one of claims 12-17 which is immunoneutral.

26. (new) A biocompatible poly-β-1→ 4-glucosamine comprising about 4,000 to about 150,000 glucosamine monosaccharides covalently attached in a β-1→ 4 conformation, and having a molecular weight of about 640,000 daltons to about 24 million daltons.

27. (new) The biocompatible poly-β-1→ 4-glucosamine of claim 26 having about 4,000 to about 15,000 glucosamine monosaccharides covalently attached in a β-1→ 4 conformation, and having a molecular weight of about 640,000 daltons to about 2.4 million daltons.

28. (new) A biocompatible poly-β-1→ 4-glucosamine comprising about 4,000 to about 150,000 glucosamine monosaccharides covalently attached in a β-1→ 4 conformation, wherein at least one glucosamine monosaccharide has been acetylated.

29. (new) The biocompatible poly-β-1→ 4-glucosamine of claim 28 wherein at least about 25% to about 75% of the glucosamine monosaccharides have been acetylated.

30. (new) The biocompatible poly-β-1→ 4-glucosamine of claim 28 wherein at least about 30% of the glucosamine monosaccharides have been acetylated.

31. (new) The biocompatible poly-β-1→ 4-glucosamine of any one of claims 26-30 whose biocompatibility is determined by an elution test.

32. (new) The biocompatible poly-β-1→ 4-glucosamine of claim 31 which has an elution test score of 0.

33. (new) The biocompatible poly-β-1→ 4-glucosamine of claim 31 which has an elution test score of 1.

34. (new) The biocompatible poly-β-1→ 4-glucosamine of claim 31 which has an elution test score of 2.

35. (new) The biocompatible poly-β-1→ 4-glucosamine of any one of claims 26-30 whose biocompatibility is determined by intramuscular implantation in rabbits.

36. (new) The biocompatible poly-β-1→ 4-glucosamine of any one of claims 26-30 whose biocompatibility is determined by intracutaneous injection in rabbits.

37. (new) The biocompatible poly-β-1→ 4-glucosamine of any one of claims 26-30 whose biocompatibility is determined by systemic injections in mice.